

ABSTRACT OF THE DISCLOSURE

(1) A modified sarcosine oxidase with improved stability in the acidic range compared to a wild-type sarcosine oxidase.

(2) A sarcosine oxidase gene encoding a modified sarcosine oxidase of the following (a),
5 (b), or (c):

(a) protein composed of the amino acid sequence represented by SEQ ID NO: 1

(b) protein composed of an amino acid sequence wherein one or some amino acid(s) are deleted, substituted, or added from the amino acid sequence represented by SEQ ID NO: 1, and which has sarcosine oxidase activity

10 (c) protein composed of an amino acid sequence which shows 80% or more homology to the amino acid sequence represented by SEQ ID NO: 1, and which has sarcosine oxidase activity

According to the present invention, sarcosine oxidases, in particular sarcosine oxidases which show optimal pH and high activity in the slightly acidic range and have improved
15 stability can be prepared efficiently, thus making the invention industrially useful.